

Referring to paragraph 2 of the Office Action, applicants have amended claim 36 to use language conforming to that used in the specification.

Referring to paragraph 6 of the Office Action, the noted claims have been amended to correct the informalities noted under section 112. The Examiner should note the proper antecedent basis for claim 30 has now been provided through the amendment to claim 26.

Referring to paragraph 8 of the Office Action, claims 1, 2, 5, 9, 18, 19, 26 and 29-32 were rejected under section 102(e) as anticipated by Ekwall (EP 0753324). Applicants traverse this rejection and provide the following comments. Ekwall merely concerns a stimulator in which the stimulation pulse energy may be varied so as to always have sufficient energy to achieve capture. Typically, Ekwall varies the stimulation pulse energy to increase during inspiration and to thereafter decrease after expiration. Typically, stimulation pulse energy is enhanced in Ekwall through the variation of pulse amplitude. Ekwall, however, as the Examiner notes, does suggest other methods for varying stimulation pulse energy including varying pulse duration as well as the more vague statement that the stimulation may be varied in their number and/or amplitude and/or duration and/or timing.

While this teaching of Ekwall, on its face, could be interpreted as broadly, applicants submit the close reading of the language takes it away from the invention. In particular, Ekwall teaches varying any number of parameters within the stimulator. Applicants interpret Ekwall to teach varying any number of these parameters within the stimulation pulse or series of pulses, either of which ultimately means the parameters are varied in so far as an evoked response is elicited. Ekwall does not teach increasing or decreasing the pacing rate per se within the respiratory cycle.

Increasing the pacing rate in synchrony with the respiratory cycle is, in fact, the essence of the present invention. The limitations regarding this are

found in each of the independent claims at issue, claims 1, 18, 26 and 31 and all of these claims stand apart from Ekwall in that they deal with varying stimulation outputs within the respiratory cycle in contrast to Ekwall who teaches varying various parameters within a respiratory cycle and within a single stimulation output, where each have a single pulse or a series of pulses to elicit an evoked response. As such applicants submit the rejection under section 102 should be withdrawn and the claims allowed.

Referring to paragraph 10 of the Office Action, applicants likewise submit claim 15 should also be allowed over the Ekwall citation.

Applicant submits the claims, as now presented, are all in a condition for allowance. Passage of the case to issue is respectfully required. The examiner is encouraged to call the undersigned on (31) 43 356 6845 to discuss any matters which may aid in passing the case to issue.

Respectfully submitted,

Alexis Renirie et al.  
Applicant  
By their Attorneys,

Date 15 July 99

  
Michael J. Jaro  
Reg. No. 34,472  
7000 Central Avenue N.E.  
Minneapolis, Minnesota 55432  
Tel: (612) 574 3279 (voicemail)  
(31) 43 356 6845 (direct)